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7201T – Fall 2012

WIKI – 4 Assignment

Campbell, J.R., Verna, M., & O’Connor-Petruso, S. (2004). Gender paradigms. *Paper presented at the IRC-2004 Conference, Lefkosia, Cyprus.*

This article focuses on gender differences with regards to mathematics. By illustrating various inequities, and showing that this is not germane to one culture or nation, the article provides support for the idea that both social and biological issues influence development in mathematics (instead of adopting the notion that only one or the other is of influence). The authors point out numerous references to studies and theories regarding both biological and socialized gender differences to reinforce their position.

Ding, C. S., Song, K., & Richardson, L. I. (2006). Do mathematical gender differences continue? A longitudinal study of gender difference and excellence in mathematics performance in the U.S.  *Educational Studies.* 40(3), 279-295

In this study, the authors examine the inconsistency in a number of previously conducted researches about gender inequality in mathematics education. They point out that some researches result in showing no gender gap while others show gender gap at different points in time. They then present their own longitudinal study of elementary, middle and high school students’ mathematic test and GPA scores over the period of 3-4 years to examine any changes in growth. This study concludes that while there is a small difference between male and female students’ test results in the elementary years, it is not significant, and the growth rate over the years is the same among boys and girls. The writers then conclude that the genetic and biological elements of a perception that boys outperform girls in mathematics are not valid based on their research results. They do not discount that in other educational institutions gender gap can exist and socialization component such as peer or adult (parent and teacher) influences can be factors behind it.

Herrelko, J.M., Jeffries, K., & Robertson, A. (2009). The impact of single gender elementary school on mathematics classes in an urban school. *Scholarlypartnershipedu.* 4(1). 5-19. Retrieved from IPFW <http://opus.ipfw.edu/spe/vol4/iss1/2/>

This article examines the results and attitudes toward the implementation of single-gender classrooms in a failing school. The school district approved the reorganization of the education system based on the legalization of single-sex classrooms by the No Child Left Behind Act, to attempt to rectify large gender differences in students’ grades. The school implemented the single-gender classrooms throughout its curriculum and accepted students on voluntary basis. The two studies that were conducted during the first year of the implementation showed the mathematics test results rising significantly for the earlier grades (1st through 4th grades) and having a decline in the higher grades. The attitudes of the students also varied by age. Younger students were more accepting of the new gendered classrooms while older students disagreed with and did not want to cooperate with the new segregation system. Despite the students and parents opinions, the test results have displayed mostly positive change in the academic achievement in a single-sex classroom.

Spencer, S. J., Steele, C. M., & Quinn, D. M. (1999). Stereotype threat and women’s math performance. *Journal of Experimental Social Psychology.* 35, 4-28.

Spencer, Steele and Quinn discuss in this article the application of Steele’s “stereotype threat” theory to women’s mathematic performance. The theory is based on the concept that when put in a situation where the socially constructed negative stereotype can be applied, have more anxiety and stress associated with a particular task within the situation out of fear of being judged within the parameters for the stereotype. The researchers conducted three (3) studies to examine and compare as to how women perform mathematical tests with and without added pressure of stereotype threat. The results showed that although women did slightly underperform to men on a difficult math test in a no-stress environment, the participants that were reminded of the prior gendered results and stereotypes, were affected by the added stress and their performances was undermined.